Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form

1. Applying for (select one):

☒ (a) Prop 13 Urban Water Conservation Capital Outlay Grant

☐ (b) Prop 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant

☐ (c) DWR Water Use Efficiency Project

2. Principal applicant (Organization or affiliation): Sacramento Suburban Water District

3. Project Title: Installation of Meters and Metered Rate for Single Family Residences

4. Person authorized to sign and submit proposal:

Name, title	Dewight Kramer, General Manager
Mailing address	3701 Marconi Avenue, Suite 100, Sacramento, CA 95821-5303
Telephone	(916) 972-7171
Fax.	(916) 332-6215
E-mail	

5. Contact person (if different):

Name, title.	Warren Jung, District Engineer
Mailing address.	3701 Marconi Avenue, Suite 100, Sacramento, CA 95821-5303
Telephone	(916) 972-7171
Fax.	(916) 332-6215
E-mail	

6. Funds requested (dollar amount): 906,800

7. Applicant funds pledged (dollar amount): 796,800

8. Total project costs (dollar amount): 1,703,600

9. Estimated total quantifiable project benefits (dollar amount): $716,012 (discounted)

Percentage of benefit to be accrued by applicant: 100 % of the avoided costs benefit

Percentage of benefit to be accrued by CALFED or others: 50% of the avoided costs benefit (See Section D-4)

Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form (continued)

10. Estimated annual amount of water to be saved (acre-feet): 269-ac-ft/yr

    Estimated total amount of water to be saved (acre-feet): 5,511 ac-ft

    Over 20 years 5,511 ac-ft

    Estimated benefits to be realized in terms of water quality, instream flow, other: Dry year increase, instream flows, groundwater recharge

11. Duration of project (month/year to month/year): October 2002 through December 2004

12. State Assembly District where the project is to be conducted: SSWD 5 SCWA 10

13. State Senate District where the project is to be conducted: SSWD 5 SCWA 5

14. Congressional district(s) where the project is to be conducted: SSWD 5 SCWA 5 and 11

15. County where the project is to be conducted: Sacramento County

16. Date most recent Urban Water Management Plan submitted to the Department of Water Resources: Sacramento Suburban Water District - December 2000 Sacramento County Water Agency – December 2000

17. Type of applicant (select one):
    Prop 13 Urban Grants and Prop 13 Agricultural Feasibility Study Grants:
    - ☐ (a) city
    - ☒ (b) county
    - ☐ (c) city and county
    - ☐ (d) joint power authority
    - ☒ (e) other political subdivision of the State, including public water district
    - ☐ (f) incorporated mutual water company

    DWR WUE Projects: the above entities (a) through (f) or:
    - ☐ (g) investor-owned utility
    - ☐ (h) non-profit organization
    - ☐ (i) tribe
    - ☐ (j) university
    - ☐ (k) state agency
    - ☐ (l) federal agency

18. Project focus:
    - ☐ (a) agricultural
    - ☒ (b) urban

Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form (continued)

19. Project type (select one):
Prop 13 Urban Grant or Prop 13 Agricultural Feasibility Study Grant capital outlay project related to:

- ☒ (a) implementation of Urban Best Management Practices
- ☐ (b) implementation of Agricultural Efficient Water Management Practices
- ☐ (c) implementation of Quantifiable Objectives (include QO number(s)

.....

- ☐ (d) other (specify)

.....

DWR WUE Project related to:

- ☐ (e) implementation of Urban Best Management Practices
- ☐ (f) implementation of Agricultural Efficient Water Management Practices
- ☐ (g) implementation of Quantifiable Objectives (include QO number(s))
- ☐ (h) innovative projects (initial investigation of new technologies, methodologies, approaches, or institutional frameworks)
- ☐ (i) research or pilot projects
- ☐ (j) education or public information programs
- ☐ (k) other (specify)

.....

20. Do the actions in this proposal involve physical changes in land use, or potential future changes in land use?

- ☐ (a) yes
- ☒ (b) no

If yes, the applicant must complete the CALFED PSP Land Use Checklist found at http://calfed.water.ca.gov/environmental_docs.html and submit it with the proposal.

Consolidated Water Use Efficiency 2002 PSP
Proposal Part One
B. Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the proposal on behalf of the applicant; and

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant.

Signature	Dewight F. Kramer, Sr Name and Title General Manager	February 26,2002 Date

PROPOSAL PART TWO

PROJECT SUMMARY

The project consists of metering single family residential connections and applying metered rates in the Sacramento Suburban Water District (SSWD) and the Sacramento County Water Agency (SCWA). These connections are currently unmetered and are on flat rate billing. The intent of this project is to reduce water use by installing residential meters and then converting newly metered customers from a flat rate billing structure to an inclining block metered rate structure.

The SSWD was formed by the consolidation of the Arcade and Northridge Water Districts in February 2002. The SSWD is located in Sacramento County, north of the American River. SSWD serves approximately 44,150 connections, of which approximately 39,100 are single family connections. Currently approximately 33,780 of the single family connections are unmetered.

The SCWA purveys water in eleven separate retail service areas within unincorporated areas of Sacramento County. SCWA serves approximately 28,460 retail connections, of which approximately 26,600 are single family connections. Currently approximately 22,610 of the single family connections are unmetered.

The objective of this project is to retrofit 1,600 unmetered accounts (800 meters in SSWD and 800 meters in SCWA) with _-inch meters in two years, from 2002 through 2004. This project implements at an accelerated rate meter retrofit requirements of their Water Forum Agreement, which does not require a residential metering program to begin until 2004 and consists of a 30 year implementation period.

The project cost is $1,703,600 and the total proposed grant amount is $906,800. This project can be considered scaleable but not separable. It is expected that 25 percent of the average single-family customer water use will be conserved through the installation of meters, resulting in an average water savings of 269 ac-ft/year, or 5,511 ac-ft over a 20 year period.

A. SCOPE OF WORK: RELEVANCE AND IMPORTANCE

This section describes the nature, scope, and objectives of the project. It also includes a statement of critical local, regional, Bay-Delta, State and federal water issues and a description of how this project is consistent with local and regional water management plans and other resource management plans.

A.1 Nature, Scope, and Objectives of the Project

This project consists of installing _-inch water meters on single-family connections and then implementing an already established, inclining block metered rate structure on the newly metered connections. The costs of the project primarily involve the purchase and installation of water meters. SSWD and SCWA serve a total of approximately 72,600 connections, of which approximately 65,700 are single family connections. Currently approximately 56,390 of the single family connections are unmetered. In this project 1,600 residential connections will be retrofitted with meters.

In their Water Forum Agreement conservation element, SSWD and SCWA have agreed to annually install 3.3 percent to 5 percent of their total number of unmetered residential connections beginning in 2004, the fourth year after the signing of the Water Forum Agreement in 2000. This project proposes to accelerate SSWD's and SCWA's Water Forum commitment through the purchase and installation of 1,600 residential meters at currently unmetered single family accounts within the contract period (October 2002-December 2004).

This project involves the implementation of urban water conservation best management practice (BMP) numbers 4 *Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections* and 11 *Conservation Pricing*, as defined by the California Urban Water Conservation Council (CUWCC). The unpredictable water supply and ever increasing demand on California's complex water resources have resulted in a coordinated effort by the California Department of Water Resources (DWR), water utilities, environmental organizations, and other interested groups to develop a list of urban BMPs for conserving water. This consensus-building effort resulted in the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), which formalizes an agreement to implement these BMPs and makes a cooperative effort to reduce the consumption of California's water resources. While the agencies participating in this application have not signed the MOU, they have signed the Water Forum Agreement, which has similar conservation requirements.

The objectives of this project are to significantly increase water use efficiency by installing water meters. It is widely recognized that billing customers based on metered water use is an effective means of encouraging water use efficiency. Meter retrofits is anticipated to result in 25 percent reduction in demand by retrofitted accounts. In addition, it is important to note that meters are instrumental to a number of conservation efforts.

A.2 Statement of Issues, Project Need, and Project Consistency

The efficient use of California's limited water supplies is a critical local, regional, and statewide water issue.

Like many of the Central Valley communities in California, the SSWD and SCWA historically did not meter their single family residential customers. Because of the relatively low cost of water, retrofitting meters was historically not cost effective. Water rates for residential customers were based on a flat monthly rate for any quantity of water use. This flat rate system has lead to relatively high per capita water use as compared to metered communities. The SSWD and SCWA utilize surface water from the American and Sacramento Rivers and the Sacramento north and south area groundwater basins as its water supply. Both of these water supply sources are limited and as a result their efficient use is critical to the ongoing availability of water locally, regionally and statewide.

Another critical local and regional issue is the declining level of water in the Sacramento north and south area groundwater basins. The efficient use of water will help maintain the long-term sustainable yield of the groundwater basins north and south of the American River through conjunctive use practices. This is the objective of the Sacramento Groundwater Authority (SGA). SGA is a joint powers authority (JPA) of the City of Sacramento, City of Citrus Heights, City of Folsom and County of Sacramento. The JPA has delegated the powers necessary to protect and regulate the local groundwater basin to the overlying water purveyors. Pumping fees imposed by the SGA will

most likely be used as a mechanism to limit groundwater pumping. The SGA's goal is to limit the long-term average groundwater pumping to approximately 131,000 ac-ft per year, which was approximately the amount of groundwater pumped within the SGA boundaries in 1990. It is critical to customers in the SSWD and SCWA that water is used efficiently in order to have a reliable water supply and avoid pumping restrictions or increased pumping fees that would raise water rates for customers.

The recently signed Water Forum Agreement was the result of the efforts of a diverse group of community leaders formed in 1994 to formulate principles for a regional solution of future water supply. The Water Forum is a comprehensive package that will achieve two coequal objectives: provide a reliable and safe water supply for the region's economic health and planned development to the year 2030; and preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River. One element of the Water Forum is to ensure that sufficient water supplies will be available to customers in dry years as well as wet years. The Water Forum Agreement consists of three year types based on projected flow in the American River. These year types define diversion allowances based on flow limitations as set in the Water Forum Agreement. This is a critical local and regional issue that involves minimum flows that must remain in the American River downstream of Folsom Reservoir. It is critical to customers in the SSWD and the SCWA that water is used efficiently in order to have a reliable water supply during dry years when diversion restrictions from the American River are in place.

This project will positively impact the Bay-Delta systems by increasing instream flows and reducing the overall reliance on the surface water supplies from the American and Sacramento Rivers upstream from the Bay-Delta. SSWD's and SCWA's conservation efforts are an important part of a long-term, comprehensive effort to reduce pressure on the Bay-Delta system to meet regional and state-wide water needs. One of the fundamental objectives of the CALFED Bay-Delta program is to reduce the mismatch between Bay-Delta water supplies and current projected beneficial uses dependent on the Bay-Delta system. Water use efficiency projects are one of the cornerstone strategies the CALFED Bay-Delta program is deploying to achieve this objective. Installation of meters on currently unmetered residences will reduce the demand for a significant urban end-use of Bay-Delta water supplies

B. SCOPE OF WORK: TECHNICAL/SCIENTIFIC MERIT, FEASIBILITY, MONITORING AND ASSESSMENT

This section describes the methods, procedures and facilities associated with the project. A task list and schedule and quarterly expenditure of the project are also included in this section.

B.1 Methods, Procedures, and Facilities

The SSWD and SCWA will use standard engineering, construction, and rate structure methods to implement this project. Standard purchasing and contracting procedures will be used to purchase meters in bulk and use a general contractor for meter installation. This project does not require the purchase of land or easements. All planning, design, and engineering is being performed in-house. Where required, SSWD and SCWA will acquire encroachment permits. The SSWD's and SCWA's inclining block metered rate structures were developed using accepted American Water Works Association (AWWA) rate-making procedures.

SSWD and SCWA have developed project control procedures to ensure that this project is fully implemented in accordance with the project budget and schedule.

Throughout the period of meter installation, the inspector will check on the contractor four times per day. Each month a SSWD/SCWA employee will provide a progress report summarizing the number of meters installed by the contractor.

B.2 Task List and Schedule

The tasks for implementation of this project and the project schedule are described below and presented on Figure B-1. The schedule includes deliverable items, due dates, and projected costs for each task. Although this project can be considered scaleable, tasks are not considered separable. Table B-1 presents a quarterly expenditure projection.

Tasks

1. Finalize Contract Documents (Project design/specifications).

2. Obtain encroachment Permits - SSWD and SCWA will have to apply for encroachment permits from Sacramento County.

3. Obtain competitive Bid – lowest acceptable bid.

4. Purchase and Install Meters – meters will be purchased in bulk.

5. Prepare Monthly Installation Progress Reports – These reports will be status reports summarizing progress of meter installation of actual meters installed compared to project goal. These reports will be prepared on a monthly basis. These reports will aid in project control.

6. Implement Metered Billing - Billing at a metered rate is implemented by SSWD during the fall and winter months following the installation of the meter. SCWA places each customer on statistical billing (metered, flat rate) and will begin billing at a metered rate one year following meter installation.

7. Prepare Monitoring and Assessment Report – This report will be written following the end of the project. It will include a summary of installations, data analysis of a control group of currently metered connections compared to newly metered installations, and resulting water use and water savings.

Figure B-1. Project Timeline

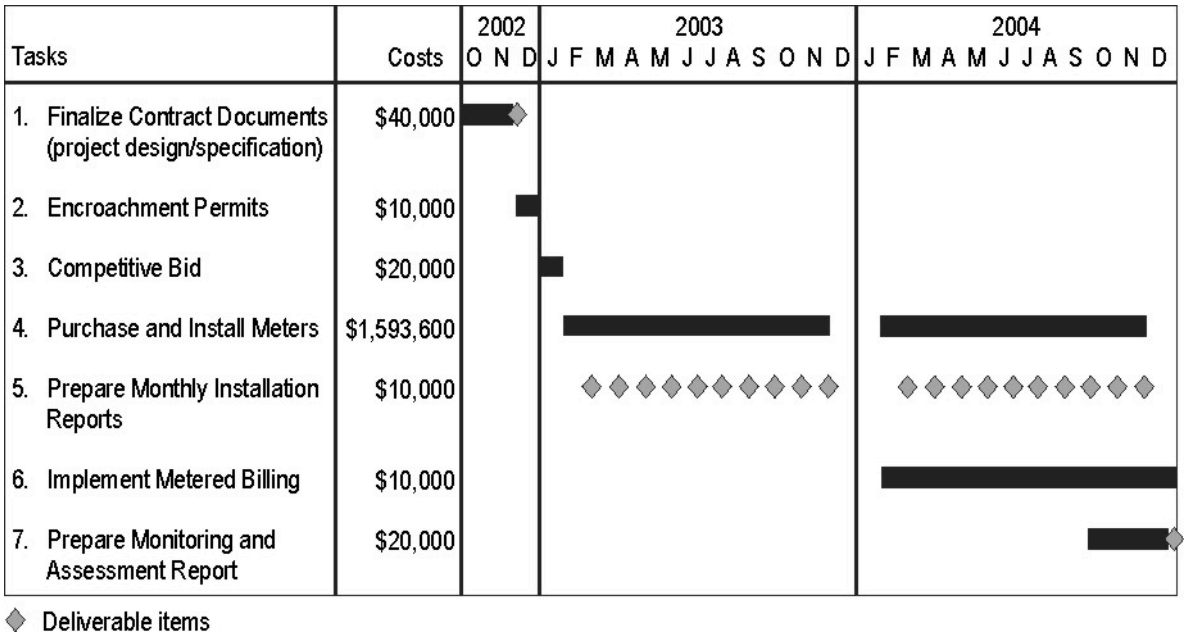


Table B-1. Quarterly Expenditure Projection

Quarter	Months	Expenditure
2002		
4	October-December	$50,000
2003		
1	January-March	$180,360
2	April-June	$240,540
3	July-September	$240,540
4	October-December	$160,360
2004		
1	January-March	$162,178
2	April-June	$243,267
3	July-September	$243,267
4	October-December	$183,088
Total		$1,703,600

B.3 Monitoring and Assessment

A list of project-specific performance measures that will be used to assess project success in relation to its goals and reports is as follows:

- Monthly Installation Progress Reports will be prepared. These reports will be monthly status reports prepared during meter installation months summarizing progress of meter installation of actual meters installed compared to project goal. These interim reports will be used to document the progress of the project and determine if the project is on schedule. These reports will aid in project control.

- Project performance and success will be quantified by measuring actual water savings. Water use of non-metered residential customers prior to meter installation will be compared to

water use of newly metered residential customers after meters have been installed. A Monitoring and Assessment Report will be prepared that will quantify the water savings achieved by the project.

The Monitoring and Assessment Report will be made available to the public at the SSWD and SCWA offices. The reports will also be submitted to the California Department of Water Resources at the time of their completion.

B.4 Preliminary Plans and Specifications and Certification Statements

Preliminary plans and specifications are provided in Appendix A.

C QUALIFICATIONS OF THE APPLICANTS AND COOPERATORS

The qualifications for the project manager and cooperators to be involved in this project are discussed in this section.

C.1 Resumes

Project managers responsible for the metering program will be Warren Jung, P.E., District Engineer for SSWD, and David Underwood for SCWA. Mr. Jung's and Mr. Underwood's resumes are included in Appendix B.

C.2 External Cooperators

A letter of commitment from SCWA is provided in Appendix C. Meters will be installed by the contractors receiving the bid award.

D BENEFITS AND COSTS

This section includes a breakdown and justification of the project budget and cost sharing information. Also described and analyzed are the benefits and costs of this project.

D.1 Budget Breakdown and Justification

Table D-1 presents a detailed estimated budget that includes relevant line items for capital outlay project proposals and justification of each line item. This table also indicates the amount of cost sharing for each element of this project.

D-1. Detailed Budget – Capital Outlay Project Proposal

Item	Justification	Labor		Other direct costs, dollars	Total, dollars	Water agency portion		Prop 13 portion
		Hours	Dollars			SSWD	SCWA	
Land Purchase /Easement	None required	0	0	0	0	0	0	0
Planning/Design/Engineering	None-in house		0	0	0	0	0	0
Materials/Installation	1,600 meters @ $996/meter		0	1,593,600	1,593,600	398,400	398,400	796,800
Structures	None required	0	0	0	0	0	0	0
Equipment Purchases/Rentals			0		0	0	0	0
Environmental Mitigation/Enhancement	Negative Declaration - 1996 version, 2000 version to be completed	0	0	0	0	0	0	0
Construction/Administration/ Overhead	Mobilization	0	0	100,000	100,000	0	0	100,000
Project/Legal/License Fees	Encroachment permits	0	0	10,000	10,000	0	0	10,000
Contingency		0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0
Project Total		0	0	1,703,600	1,703,600	398,400	398,400	906,800

D.2 Cost Sharing

SSWD and SCWA are requesting fifty-three percent or $906,800 in funding from the Proposition 13 Urban Water Conservation Program.

There are no additional funding commitments or cost sharing agreements for this project.

D.3 Benefit Summary and Breakdown

There are multiple expected beneficial outcomes of this project and physical changes will occur as a result. The value of those outcomes and physical changes are both quantifiable and non-quantifiable. The quantifiable values of physical changes that will occur as a result of this project and the beneficiary of each benefit are listed in Table D-2. Project outcomes and benefits will be shared among the project's beneficiaries and will directly or indirectly contribute to CALFED goals.

Table D-2. Quantifiable Physical Changes, Expected Benefits, and Beneficiaries

Physical change	Expected benefit	Beneficiary
Decreased surface water diversions	25% water savings	CALFED goal/local recreation
Reduced groundwater extraction	25% water savings	CALFED goal/Sacramento north and south area groundwater basin/customer
SSWD and SCWA will save money on avoided costs of a new water supply	$250/acre-foot	SSWD/SCWA/customer

Non-Quantifiable project outcomes and benefits are listed and described in Table D-3. It is indicated how each non-quantified outcome or benefit will be shared among the project beneficiaries. The non-quantified outcomes expected to directly or indirectly contribute to CALFED goals are also identified and delineated.

Table D-3. Non-Quantifiable Benefits

Physical change	Expected benefit	Beneficiary
Decreased surface water diversions	• Improve aquatic and terrestrial habitat in American River • Provides increased water supply reliability to water users while at the same time assuring the availability of sufficient water to meet fishery protection and restoration recovery needs.	CALFED goal/ SSWD/customer
Reduced groundwater extraction	• The reduction in groundwater extraction will assist with reducing subsidence and mitigating overdraft • Ability of SSWD/SCWA to meet local water demands will be increased due to reliability of supply increase from groundwater recharge.	CALFED goal/ Sacramento Area Groundwater Basin/SSWD/SCWA
Less water pumped into the system	• Energy savings • Decreased wastewater production	Energy provider/SSWD/ SCWA/ customer/ Sacramento Regional County Sanitation District
Customers consume less water	Incremental cost savings based on metered rate structure	Customer

D-4. Assessments of Costs and Benefits

This section includes an assessment that summarizes the costs and benefits of the proposed project. The major analysis assumptions are listed and explained. This section also shows the present value of the quantified costs and benefits to the applicant, CALFED, and other parties affected by the project and summarizes non-quantified costs and benefits to the applicant, CALFED, and other parties affected by the project.

This project is locally cost effective to SSWD and SCWA when evaluated for costs actually incurred to the water agencies. Based on the benefit-cost ratio assessment in Table D-4, using project benefits and costs, the project has a benefit to cost ratio of 1.04. Since this number is greater than one, it indicates an economically justifiable project.

Below is a list and explanation of all major analysis quantifiable benefits/costs assumptions and methodologies.

1. The total number of meters to be installed is 1,600. (800 meters in 2003, and 800 meters in 2004).

2. This project will reduce water usage by 25 percent of the pre-metered residential customer water use, *BMP Costs and Saving Study* (California Urban Water Conservation Council, July 2000).

3. Meters will cost an average of $996 each, including meter purchase and installation. This price includes $445 for the materials (meter readers, body, electronics, box, plus tax) and $551 for installation (weighted average for meters that will be installed in turf and concrete). This economic analysis evaluates the economics of the project from just the perspective of the agency receiving the grant. The analysis only considers those costs actually incurred by the agency, which is $498 per meter as shown in Table D-1.

4. The value of conserved water in the SSWD and SCWA service area is $250/ac-ft. This is the marginal cost of water, which includes the amortized capital cost for expansion or construction of future water treatment plants, wells, and pipeline, and annual operations, maintenance costs, and pumping costs. The marginal cost of water for the applicants is at the higher end of the range in comparison to the overall Sacramento metropolitan area. This is caused by the need for both SSWD and SCWA to limit groundwater pumping because of groundwater overdraft concerns. New water supplies will require the construction of a new surface water treatment plant in the case of an existing WTP on Folsom Lake in case of SSWD.

5. The current flat rate, unmetered single family water usage is approximately 600 gallons per day (gpd). Single family water usage is based on the historical single family water use in the SSWD service area. The unit water use factor was established by comparing historical data for numbers of single family residential units to water production for several years during the period between 1990 and 1999.

6. The useful life of a meter is 20 years.

7. All quantified benefits and costs are expressed in year 2001 dollars using a 6 percent discount rate as required in part D.4.b and D.4.c of the Consolidated Water Use Efficiency 2002 Proposal Solicitation Package.

An economic analysis of this project, based on the assumptions listed above is shown in Table D-4. The present values of the quantified costs and benefits for the applicant, each project beneficiary, and CALFED are quantified in Table D-5. The applicants will receive benefit due to not needing to expand treatment and other facilities due to the water savings. CALFED will benefit due to reduced surface water diversions from the American River. It is assumed that the value of the CALFED benefit would be 50 percent of the water savings using the same value of conserved water. A summary of the non-quantified costs and benefits to the applicant, each project beneficiary, and CALFED are summarized in Table D-6.

Table D-4. Economic Analysis

Assumptions		
No.	Assumption	
(5)	Value of conserved water ($/AF) =	250
(9)	Discount rate (real) =	6%
(6)	Single-family water usage (gpd/unit) =	600
(2)	Water savings =	25%
(3)	Conservation measure unit cost to the water agencies ($) =	498
(1)	Number of meters to install =	1,600

				Benefits ($)					Costs ($)				
Calendar Year	Number of Meters Installed per year	Incremental Water Savings (AF/yr)	Annual Water Savings (AF/yr)	Avoided Capital Costs	Avoided Variable Costs	Avoided Purchase Costs	Total Undiscounted Benefits	Total Discounted Benefits	Capital Costs	Financial Incentives	Operating Expenses	Total Undiscounted Costs	Total Discounted Costs
Assumptions	(1)	(2), (6)	(8)		(3), (5)			(9)	(1), (3)				(9)
2002		0	0	0	0	0	0	0	0	0	0	0	0
2003	800	134	134	0	33,606	0	33,606	29,909	398,400	0	0	398,400	354,575
2004	800	134	269	0	67,211	0	67,211	56,432	398,400	0	0	398,400	334,504
2005	0	0	269	0	67,211	0	67,211	53,237	0	0	0	0	0
2006	0	0	269	0	67,211	0	67,211	50,224	0	0	0	0	0
2007	0	0	269	0	67,211	0	67,211	47,381	0	0	0	0	0
2008	0	0	269	0	67,211	0	67,211	44,699	0	0	0	0	0
2009	0	0	269	0	67,211	0	67,211	42,169	0	0	0	0	0
2010	0	0	269	0	67,211	0	67,211	39,782	0	0	0	0	0
2011	0	0	269	0	67,211	0	67,211	37,530	0	0	0	0	0
2012			269	0	67,211	0	67,211	35,406	0	0	0	0	0
2013			269	0	67,211	0	67,211	33,402	0	0	0	0	0
2014			269	0	67,211	0	67,211	31,511	0	0	0	0	0
2015			269	0	67,211	0	67,211	29,728	0	0	0	0	0
2016			269	0	67,211	0	67,211	28,045	0	0	0	0	0
2017			269	0	67,211	0	67,211	26,457	0	0	0	0	0
2018			269	0	67,211	0	67,211	24,960	0	0	0	0	0
2019			269	0	67,211	0	67,211	23,547	0	0	0	0	0
2020			269	0	67,211	0	67,211	22,214	0	0	0	0	0
2021			269	0	67,211	0	67,211	20,957	0	0	0	0	0
2022			269	0	67,211	0	67,211	19,771	0	0	0	0	0
2023			269	0	67,211	0	67,211	18,651	0	0	0	0	0
Totals:	1,600	269	5,511	0	1,377,828	0	1,377,828	716,012	796,800	0	0	796,800	689,079

Results (to the applicant) Benefit cost ratio:	**1.04**

Table D-5. Summary of Quantifiable Present Value Costs and Benefits

	Costs	Benefits	
	dollars	Water, dollars	Water, ac-ft
Water Agencies (SSWD, SCWA)	$689,079	$716,012	5,511
CALFED	None	$358,006[a]	5,511

[a] See text.

Table D-6. Summary of Non-quantifiable Costs and Benefits

	Non-quantified costs	Non-quantified benefits
Water Agencies (SSWD, SCWA)	Less revenue due to declined customer water use	• Increased water supply reliability • Reduction in groundwater extraction will assist with reducing subsidence and mitigating overdraft
CALFED	None	• Increased water supply reliability to water users while at the same time assuring the availability of sufficient water to meet fishery protection and restoration recovery needs • Reduction in groundwater extraction will assist with reducing subsidence and mitigating overdraft • Reliability of supply increase from groundwater recharge • More water for Bay-Delta use
Customer	None	• Incremental cost savings based on metered rate structure • Increased water supply reliability
Energy provider	None	• Energy savings as a result of less water pumped into the system.
Sacramento Regional County Sanitation District	None	• Decreased wastewater production
American and Sacramento River Ecosystems	None	• Improved aquatic and terrestrial habitat in American and Sacramento Rivers • More water available to meet fishery protection and restoration recovery needs
Sacramento Area Groundwater Basin		• Reduction in groundwater extraction will assist with reducing subsidence and mitigating overdraft

E. OUTREACH, COMMUNITY INVOLVEMENT AND ACCEPTANCE

This project is consistent with the California Urban Water Conservation Council's Memorandum of Understanding regarding water conservation. It is also consistent with SSWD's and SCWA's Water Forum Agreement and the Regional Water Authority.

Public information is an ongoing component of the SSWD's water conservation program. A primary component of their public information program is the Northridge Gardens, a Xeriscape demonstration garden with year-round activities.

SSWD produces a quarterly newsletter that includes a regular feature devoted to the promotion of water conservation. The newsletter is distributed through the mail to all SSWD customers. In addition, the SSWD has an active role in the Sacramento Area Water Works Association, which promotes water conservation news articles, fliers, media coverage, and community events. SSWD contributes annually to SAWWA for public information programs and school education programs.

SCWA produces a bi-annual newsletter that is dedicated to water conservation. It is mailed to all customers. SCWA participates in SAWWA and contributes to the program annually according to the number of water connections (last year it was $8,960). SCWA and Southgate Recreation District have the Donna M. Dean Water Conservation Garden. It is open to the public for self guided tours.

In addition to the ongoing water conservation public education program, 10 days prior to meter installation, SSWD and SCWA will distribute notices for notification of meter installation. Three to four days prior to installation, the contractor will walk from door to door notifying the customers of the installation. If a customer is not home, the contractor will leave a notice at the door. If homeowners are having a problem with the meter installation, the contractor will speak with them to discuss a resolution. If the problem is not resolved, the customer will be directed to speak to the District Engineer. Customers will be notified and educated about this program through mail notices and through information provided on their water bills. Public meetings will be held at regularly scheduled meetings with the Board of Directors concerning change over from flat to metered rates.

Third party impacts include temporary inconvenience to local residents due to meter installation. Meter installations will take no longer than four to five hours per meter. Some meter installations will require encroachment upon residents' sidewalks, driveways, or front yard lawn.

A contractor will be selected through competitive bidding for lowest acceptable bid to perform the actual installations of the meters. It is anticipated that the project will require 3.5 part time water agency positions and 10 to 12 people employed by the contractor for SSWD and SCWA, each. Once the meters are installed, there will not be a need for any new employment.

APPENDIX A

Preliminary Plans and Certification Statements

Certification Statements

Engineering feasibility statement

I, Warren Jung, a California registered civil engineer, have reviewed the information presented in support of this application. Based on this information, and any other knowledge I have regarding the proposed project, I find that it can be designed, constructed, and operated to accomplish the purpose for which it is planned. There is a sufficient water supply for the project. The information I have reviewed to document this statement is included (provide list, e.g., feasibility studies, engineering design studies, water rights permits, etc.).

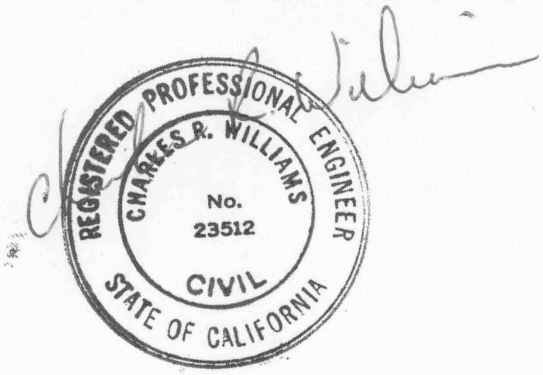
Documents Reviewed:

(Original signature and stamp with expiration date)

Certification Statement

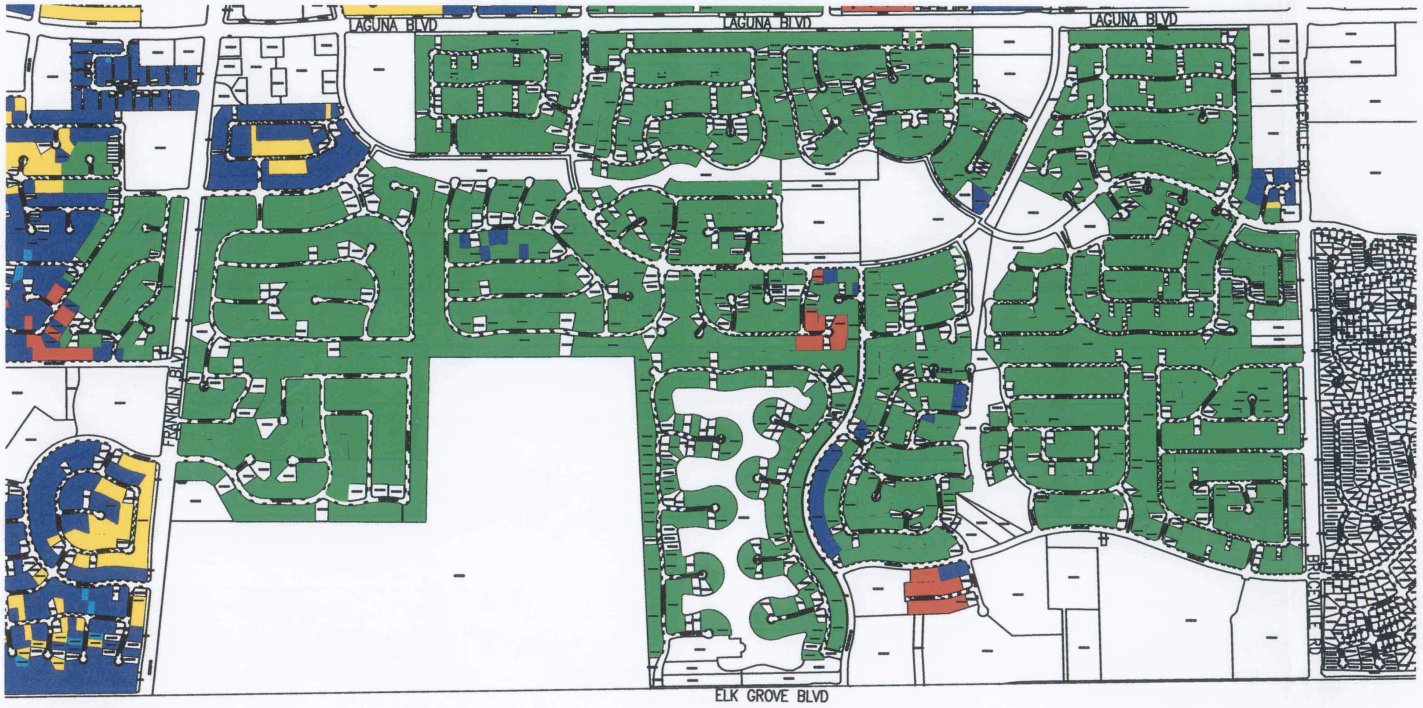
I, Charles R. Williams, a California registered civil engineer, have reviewed the information presented in support of this application. Based on this information, and any other knowledge I have regarding the proposed project, I find that it can be designed, constructed, and operated to accomplish the purpose for which it is planned. There is a sufficient water supply for the project. The information I have reviewed to document this statement includes:

1- Water Forum Agreement, January 2000
2 - Urban Water Management Planning Act, December 2000
3 – Water Conservation Plan, Sacramento County Water Agency, November 1998
4 – County of Sacramento Publics Works Agency – Standard Construction Specifications, September 2001
5 – County of Sacramento Publics Works Agency – Improvement Standards



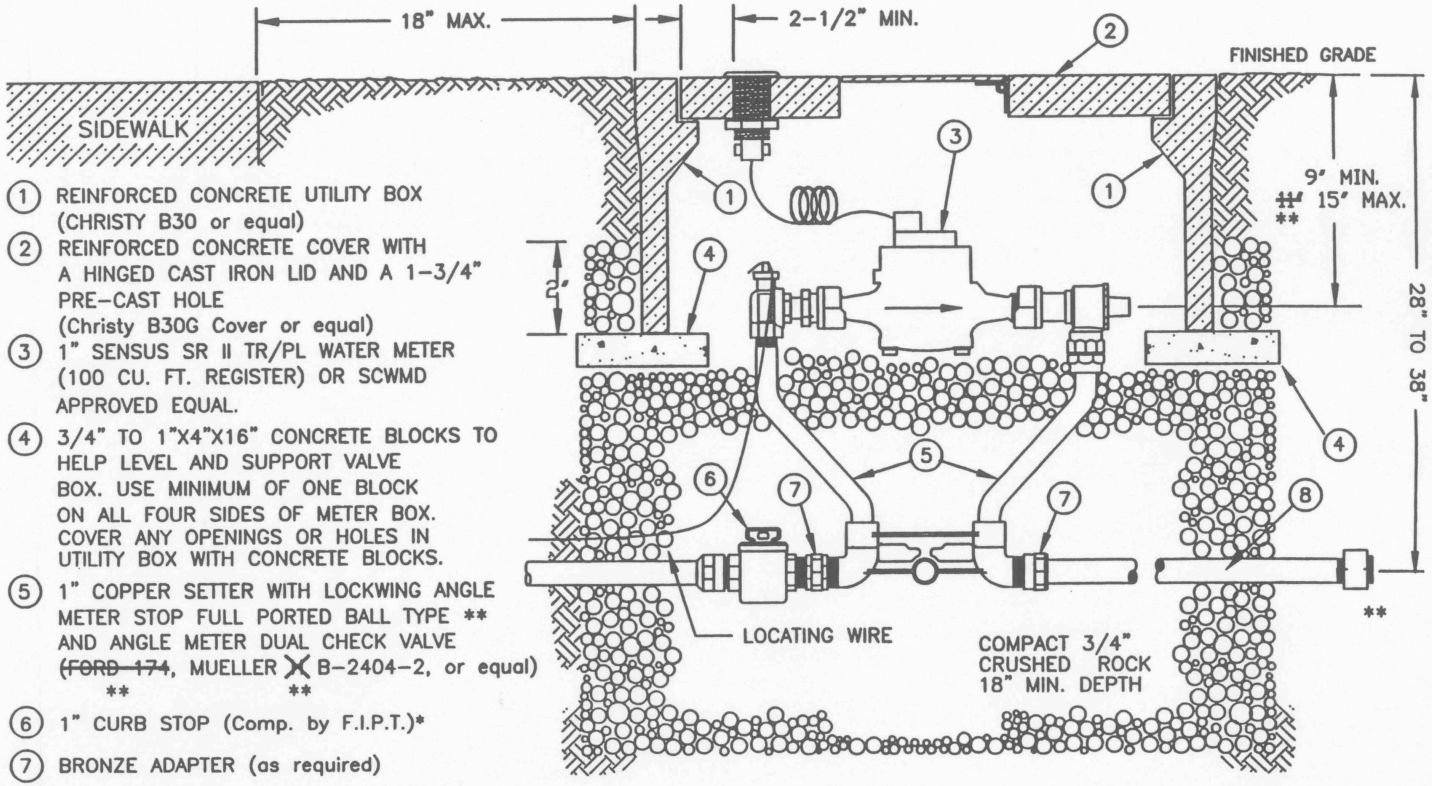
CE Certificate Expiration Date: 12/31/2005

SCWA Laguna Service Area



LEGEND

	Idler (with hole drilled on lid)	(741)
	Meter Retrofit	(4,824)
	Neptune Touch Read	(67)
	Sensus Touch Read	(1,029)
	Meters need Touch Read	(12)



(1) REINFORCED CONCRETE UTILITY BOX (CHRISTY B30 or equal)

(2) REINFORCED CONCRETE COVER WITH A HINGED CAST IRON LID AND A 1-3/4" PRE-CAST HOLE (Christy B30G Cover or equal)

(3) 1" SENSUS SR II TR/PL WATER METER (100 CU. FT. REGISTER) OR SCWMD APPROVED EQUAL.

(4) 3/4" TO 1"X4"X16" CONCRETE BLOCKS TO HELP LEVEL AND SUPPORT VALVE BOX. USE MINIMUM OF ONE BLOCK ON ALL FOUR SIDES OF METER BOX. COVER ANY OPENINGS OR HOLES IN UTILITY BOX WITH CONCRETE BLOCKS.

(5) 1" COPPER SETTER WITH LOCKWING ANGLE METER STOP FULL PORTED BALL TYPE ** AND ANGLE METER DUAL CHECK VALVE ~~(FORD 174~~, MUELLER ~~X~~ B-2404-2, or equal)
** **

(6) 1" CURB STOP (Comp. by F.I.P.T.)*

(7) BRONZE ADAPTER (as required)

(8) 1" x 36" BRONZE OR TYPE K COPPER NIPPLE WITH THREADED ~~END CAP~~ ** COUPLING AND THREADED PLUG

NOTE:

ALL METALLIC PIPES AND FITTINGS SHALL BE ENCASED WITH 6 MIL PLASTIC SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS

* Compression by female iron pipe threads

** Changed from approved improvement standards.

DIRECTOR

SACRAMENTO COUNTY
PUBLIC WORKS AGENCY

1" RESIDENTIAL METERED WATER SERVICE

SCALE: NONE
DATE: 3/99

8-6A

APPENDIX B

Resumes

Warren Jung

District Engineer

Sacramento Suburban Water District
3701 Marconi Avenue, Suite 100
Sacramento, California 95821
Phone: (916) 972-7171
Fax: (916) 332-6215

Experience Summary

Mr. Jung is a registered Civil Engineer in the State of California. He has worked as District Engineer since 1982 for the Northridge Water District until February 1, 2002 when the district merged with the former Arcade Water District to form the new Sacramento Suburban Water District whereby he will retain that position to represent both areas. His responsibilities are managing the District's operations in engineering, construction, studies, reports, design, water conservation, and other utility functions as necessary. Prior to 1982, he worked in the consulting field as a design engineer and a materials and soils specialist. During his 20 years in the water industry, Mr. Jung has been involved with other water agencies in pilot programs, water conservation, areas of funding with the Department of Water Resources, the Bureau for Warren Act Contracts, Bureau Section 215 spillway water contracts and the development of alternative water supplies for the District. The former Northridge Water District was signatory to the Water Forums and the new Sacramento Suburban Water District will also become signatory to the Water Forums.

Dave Underwood

Senior Engineer/Manager

Sacramento County Department
Of Water Resources
3847 Branch Center Road, #1
Sacramento, California 95827
Phone: (916) 875-6947
Fax: (916) 875-6884

Experience

Dave has worked for the Sacramento County since 1986 and Sacramento County Department of Water resources since 1995. His water resource engineering experience includes managing the County's water supply operations and administration section, water facility design and project management, water resources planning and development, and water conservation and recycled water program management. Since February 2001, he has been the Manager of the Sacramento County Water Agency's Operations and Administration Section – Zone 41. As Manager he is responsible for the operations and maintenance engineering support group, which includes budget management, compliance of regulatory requirements, implementation of the Sacramento County Water Conservation Plan (1998), the retail portion of the County's recycled water program, and implementation of the conjunctive use water plan as outlined in the Zone 40 Water Master Plan. Water Resources is a signatory of the Water Forum Agreement and is a member of the California Urban Water Conservation Council.

Education	BS Civil Engineering – CSU Sacramento (1994)
Registration	Professional Engineer – CA #57698
Miscellaneous	Treasurer of the Sacramento Area Water Works Association (2001)

APPENDIX C

Letter of Commitment

COUNTY OF SACRAMENTO
PUBLIC WORKS AGENCY – WARREN HARADA, ADMINISTRATOR

Department of Water Resources

Including service to the Cities of Citrus Heights and Elk Grove

Keith DeVore, Director

March 1, 2002

Dewight Kramer
Sacramento Suburban Water District
3701 Marconi Avenue, Suite 100
Sacramento, CA 95821-5303

RE: CALIFORNIA DEPARTMENT OF WATER RESOURCES PROPOSITION 13 GRANT APPLICATION – SINGLE FAMILY METER RETROFIT PROGRAM

Dear Mr. Kramer:

We are in support of the Sacramento Suburban Water District grant proposal being submitted to the California Department of Water Resources (DWR) under the Proposition 13 grant solicitation due March 1, 2002.

We understand that we are an external cooperator as defined by the Department of Water Resources given that our agency will be an indirect recipient of these funds if the grant is awarded to the Sacramento Suburban Water District.

We confirm that we are prepared to match funding being requested of the DWR for single family meters retrofitted in our service area within the grant proposal.

We look forward to being a partner with the Sacramento Suburban Water District on this urban water use efficiency grant program as it further assists our ability to meet our Sacramento Water Forum commitments at an accelerated rate.

Sincerely,

Dave Underwood, P.E.
Senior Civil Engineer
Sacramento County Water Agency

Main Office: 827 7th Street, Room 301, Sacramento, CA 95814 • Phone: (916) 874-6851 • Fax: (916) 874-8693
Field Offices: *Drainage Operations and Maintenance* – 3847 Branch Center Road, Sacramento, CA 95827 • Phone: (916) 875-7159
Water Supply Facilities Operations and Administration – 3847 Branch Center Road, Sacramento, CA 95827 • Phone: (916) 875-4913